U.S. Fish & Wildlife Service

Critical Habitat for 47 Plant Species from the Island of Hawaii

Under the Endangered Species Act, the U.S. Fish and Wildlife Service is charged with designating critical habitat for threatened and endangered species whenever it is determined to be prudent and determinable. A proposed rule to designate critical habitat for 47 plant species on the island of Hawaii was published in the Federal Register on May 28, 2002. Comments will be accepted through July 29, 2002.

Photo by Greg Koob/USFWS

Hibiscadelphus hualalaiensis or hau kuahiwi, only known from cultivation

What critical habitat are you proposing on the island of Hawaii?

We are proposing critical habitat for 47 plant species on the island of Hawaii (see attached list) in 28 units totaling 437,285 acres or 17 percent of the island. A map is attached to this fact sheet.

For as many as half of these species, fewer than 50 individual plants are known to exist in the wild. Twenty-seven of the plant species are endemic to the island of Hawaii, meaning they are found no where else in the world.

Critical habitat is not proposed for 11 species. Seven of these species (*Cenchrus agrimonioides*, *Ctenitis squamigera*, *Hedyotis cookiana*, *Mariscus pennatiformis*, *Phlegmariurus mannii*, *Phyllostegia parviflora*, and *Plantago princeps*) no longer occur on the island of Hawaii, and we are unable to identify habitat essential to their conservation on the island. However, critical habitat for these species is being proposed on other islands.

Critical habitat designation is not prudent for two species of loulu palm, *Pritchardia affinis* and *Pritchardia schattaueri*, because it would likely increase the threats from vandalism or collection of these species on the island of Hawaii. And, critical habitat is not proposed for two species, *Cyanea copelandii* ssp. *copelandii* and *Ochrosia kilaueaensis*, because they have not been seen recently in the wild and no viable genetic material is known to exist.

Who owns the lands on which critical habitat is being proposed?

Approximately 33 percent of the land proposed as critical habitat is under federal ownership or jurisdiction on the island of Hawaii. Designation of critical habitat is proposed on General Services Administration property at South Point, the Hakalau Forest and Kona Forest Units of the U.S. Fish and Wildlife Service's Hakalau Forest National Wildlife Refuge, Hawaii Volcanoes National Park, and on land under Federal jurisdiction at the U.S. Army's Pohakuloa Training Area.

Fifty-one percent of the land proposed as critical habitat is owned by the State of Hawaii, and the remaining 16 percent is on privately owned lands.

What are the existing permitted land uses in the proposed critical habitat areas?

Nearly all of the land within the critical habitat units is unsuitable for

Photo by Greg Koob/USFWS

Ischaemum byrone or Hilo ischaemum

development, land uses, and activities due to its remote location, lack of access, and rugged terrain. About 84 percent of the proposed critical habitat units on the island of Hawaii are within the State Conservation District, which strictly limits development and most other activities. Sixteen percent are in agricultural zones, and less than 1 percent are in urban areas.

How can the public comment on the proposed rule?

The proposed rule can be accessed via the Internet at http://www.access.gpo.gov/su_docs/index.html. A limited number of copies are available by calling the Fish and Wildlife Service in Honolulu at 541 3441.

Written comments may be submitted by mail to the Field Supervisor, U.S. Fish and Wildlife Service, Pacific Islands Office, 300 Ala Moana Blvd., Room 3-122, Box 50088, Honolulu, HI 96850; or by delivering them to the same address. Comments may be submitted by electronic mail to FW1PIE_BigIsland_crithab@r1.fws.gov.

If requested within 45 days after publication of the proposed rule, a public hearing and informational session will be scheduled on the island of Hawaii. Written and oral comments would be accepted at that time.

Why is the Service proposing critical habitat throughout Hawaii?

In 1998, the United States District Court for the District of Hawaii directed the U.S. Fish and Wildlife Service to review the prudency determinations for 245 listed plant species in Hawaii, including 58 species on the island of Hawaii. We also were ordered to publish proposed critical habitat designations or nondesignations for at least 100 species by November 30, 2000, and for the remaining 145 species by April 30, 2002.

As a result of a subsequent court order, we also included proposed critical habitat designations or nondesignations for 10 more recently listed Maui Nui plant species. To comply with these orders, we are publishing 7 notices of determinations of whether critical habitat is prudent, along with proposed rules as appropriate, in the following groupings: Kauai and Niihau, Maui and Kahoolawe, Lanai, Molokai, Northwestern Hawaiian Islands, Hawaii, and Oahu.

Four of these proposals were published in the *Federal Register* in 2000: the Kauai and Niihau proposed rule on November 7, 2000; the Maui and Kahoolawe proposed rule on December 18, 2000; the Lanai proposed rule on December 27, 2000; and the Molokai proposed rule on December 29, 2000.

Based on public comments and new information, these four proposed rules were revised and republished as proposed rules. The Kauai and Niihau revised proposed rule was published in the *Federal Register* on January 28, 2002; the Lanai revised proposed rule on March 4; the Maui and Kahoolawe revised proposal on April 3; and the Molokai revised proposal on April 5, 2002. The Northwestern Hawaiian Islands proposed rule was published on May 14, 2002. This Hawaii proposal and the Oahu proposal were published in the *Federal Register* on May 28, 2002.

What are the threats to these species?

Competition from introduced plant species; habitat destruction by feral and domestic animals; agricultural, military, and residential development; and predation by cattle, insects, and rats have all contributed to bringing these plants close to extinction.

What is critical habitat?

Critical habitat is the term used in the Endangered Species Act to define those areas of habitat that are known to be essential for an endangered or threatened species to recover and that require special management or protection. The ultimate goal of the Endangered Species Act is to restore healthy populations of listed species within their native habitats so that they can be removed from the list of threatened and endangered species.

How does the designation of critical habitat increase protection for threatened and endangered species?

If critical habitat is designated for a species, all Federal agencies must consult with the Fish and Wildlife Service to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat. In addition, designation of critical habitat focuses attention on those areas that are important to species recovery.

How does critical habitat affect private landowners and State lands?

Critical habitat designation does not affect activities on State or private lands unless some sort of Federal permit, license, or funding is involved. Activities such as farming, grazing, logging, hunting, and other recreational uses generally are not affected by critical habitat designation, even if the landowner's property is within the geographical boundaries of critical habitat.

The designation has no impact on individual, city, county, or State actions if there is no Federal involvement, nor does it signal any intent of the Federal government to acquire or control the land.

How does critical habitat affect Federal agencies?

Federal agencies are required to ensure that any activity they fund, carry out, or authorize is not likely to jeopardize the survival of a listed species or destroy or adversely modify its critical habitat. By consulting with the Fish and Wildlife Service, an agency can usually minimize or avoid any potential conflicts with listed species and their critical habitat, and the proposed project may be undertaken. Most projects proceed unaffected.

How do you determine what areas to designate as critical habitat?

We consider the species' current range (*i.e.*, areas in which the species currently exists) and historic range (*i.e.*, areas that the species formerly occupied within recent memory). Then, we identify features of the habitat that are needed for the species to live and reproduce.

Examples of features of the habitat or requirements that are generally considered are:

- space for individual and population growth for normal behavior;
- food, water, air, light, minerals, or other nutritional or physiological requirements;
- cover or shelter;
- sites for breeding, reproduction, or rearing of offspring, germination, or seed dispersal; and
- areas that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

In this critical habitat proposal, we specifically considered the following habitat features: type of plant community, associated native plant species, locale (*e.g.*, steep rocky cliffs, talus slopes, streambanks), and elevation.

Are potential economic impacts considered?

Yes. Although decisions to place species on the threatened or endangered list must be based solely on biological grounds, potential economic and social effects of critical habitat designations are analyzed and considered before the designations are completed.

An area may be excluded from proposed critical habitat if the Secretary of the Interior finds that the benefits of an exclusion outweigh the conservation benefits of including the area. However, excluding an area from a critical habitat designation is allowed only if doing so will not lead to the extinction of the species.

A draft economic analysis based on this proposal is under development and will be made available for public review. We do not anticipate the designation of critical habitat on the island of Hawaii will have any significant economic impacts.

Photo by Greg Koob/USFWS

Hibiscus brackenridgei or ma`o hau hele

Photo by Greg Koob/USFWS

Delissea undulata, known on Hawaii from a single plant in Puu Waawaa

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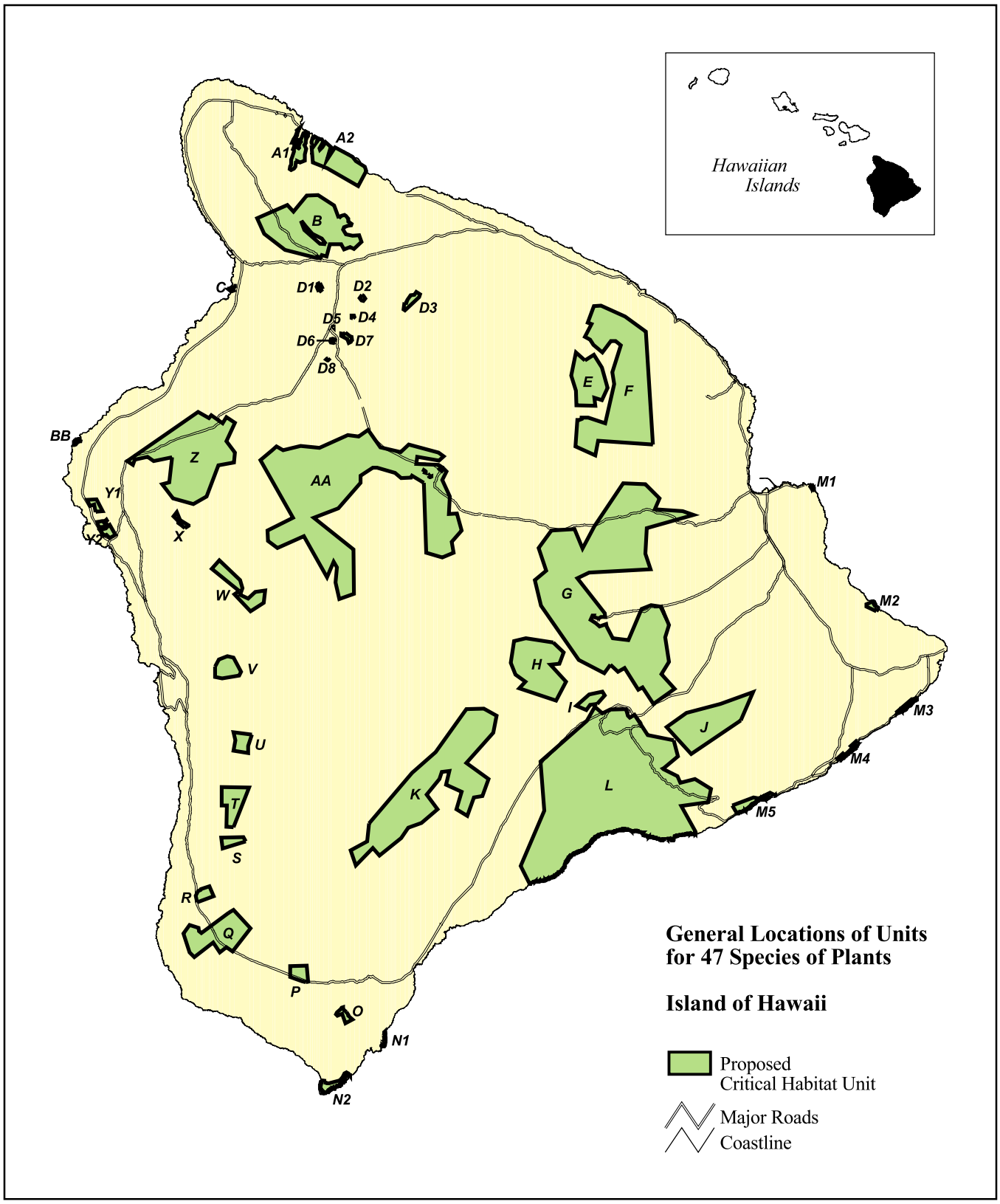
Our mission is working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of American people.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General Locations of Units for 47 Species of Plants
Island of Hawaii
Proposed Critical Habitat Unit
Major Roads
Coastline

Proposed Critical Habitat Units on the Island of Hawaii

Unit	State/Local Lands	Private Lands	Federal Lands	Total
Hawaii A	5,675 acres	2,738 acres		8,412 acres[1]
Hawaii B	14,178 acres	6,084 acres		20,263 acres[1]
Hawaii C	94 acres	<1 acre		94 acres
Hawaii D		1,305 acres		1,305 acres
Hawaii E	3,866 acres	128 acres	3,399 acres	7,393 acres
Hawaii F	11,464 acres	2,338 acres	20,561 acres	34,363 acres
Hawaii G	55,040 acres	15,760 acres	8,980 acres	79,781 acres[1]
Hawaii H	113 acres	3,476 acres	9,563 acres	13,151 acres[1]
Hawaii I		20 acres	1,269 acres	1,290 acres[1]
Hawaii J	10,636 acres	1,233 acres	647 acres	12,516 acres
Hawaii K	21,601 acres	16,191 acres		37,792 acres
Hawaii L	<1 acre		95,145 acres	95,148 acres[1]
Hawaii M	998 acres	72 acres	1,316 acres	2,386 acres
Hawaii N	1,171 acres		6 acres	1,178 acres[1]
Hawaii O	441 acres	90 acres		531 acres
Hawaii P	31 acres	1,320 acres		1,351acres
Hawaii Q	7,778 acres	992 acres		8,770 acres
Hawaii R	830 acres	126 acres		955 acres[1]
Hawaii S	868 acres	79 acres		947 acres
Hawaii T	2,704 acres	977 acres		3,681 acres
Hawaii U			1,520 acres	1,520 acres
Hawaii V		2,351 acres		2,351 acres
Hawaii W		3.654 acres		3,654 acres
Hawaii X	340 acres			340 acres
Hawaii Y	493 acres	857 acres		1,350 acres
Hawaii Z	20,552 acres	5,983 acres		26,535 acres
Hawaii AA	64,736 acres	5,206 acres	196 acres	70,138 acres
Hawaii BB	106 acres			106 acres
Totals	**223,715 acres**	**70,980 acres**	**142,601 acres**	**437,285 acres**

[1]Area differences due to digital mapping discrepancies between TMK data and USGS coastline or difference due to rounding

Summary of Island Distribution of 47 Species from the Island of Hawaii for Which Critical Habitat is Proposed

Species	Island Distribution						
	Kauai	Oahu	Molokai	Lanai	Maui	Hawaii	NW Isles, Kahoolawe, Niihau
Achyranthes mutica (NCN)	H					C	
Adenophorus periens (pendent kihi fern)	C	H	C	R	R	C	
Argyroxiphium kauense (Mauna Loa silversword)						C	
Asplenium fragile var. *insulare* (NCN)					H	C	
Bonamia menziesii (NCN)	C	C	H	C	C	C	
Clermontia drepanomorpha (oha wai)						C	
Clermontia lindseyana (oha wai)					C	C	
Clermontia peleana (oha wai)					H	H	
Clermontia pyrularia (oha wai)						C	
Colubrina oppositifolia (kauila)		C			C	C	
Cyanea hamatiflora ssp. *carlsonii* (haha)						C	
Cyanea platyphylla (haha)						C	
Cyanea shipmanii (haha)						C	
Cyanea stictophylla (haha)						C	
Cyrtandra giffardii (haiwale)						C	
Cyrtandra tintinnabula (haiwale)						C	
Delissea undulata (NCN)	C				H	C	
Diellia erecta (NCN)	H	C	C	H	C	C	
Flueggea neowawraea (mehamehame)	C	C	H		C	C	
Gouania vitifolia (NCN)		C			H	C	
Hedyotis coriacea (kioele)		H			C	C	
Hibiscadelphus giffardianus (hau kuahiwi)*						H	
Hibiscadelphus hualalaiensis (hau kuahiwi)*						H	
Hibiscus brackenridgei (mao hau hele)	H	C	H	C	C	C	Ka (R)
Ischaemum byrone (Hilo ischaemum)	R	H	C		C	C	
Isodendrion hosakae (aupaka)						C	
Isodendrion pyrifolium (wahine noho kula)		H	H	H	H	C	Ni (H)
Mariscus fauriei (NCN)			C	H		C	
Melicope zahlbruckneri (alani)						C	
Neraudia ovata (NCN)						C	
Nothocestrum breviflorum (aiea)						C	
Phyllostegia racemosa (NCN)						C	
Phyllostegia velutina (NCN)						C	
Phyllostegia warshaueri (NCN)						C	
Plantago hawaiensis (laukahi kuahiwi)						C	
Pleomele hawaiiensis (halapepe)						C	
Portulaca sclerocarpa (poe)				C		C	
Sesbania tomentosa (ohai)	C	C	C	H	C	C	NW, Ka, Ni (H)
Sicyos alba (anunu)						C	
Silene hawaiiensis (NCN)						C	
Silene lanceolata (NCN)	H	C	C	H		C	
Solanum incompletum (popolo ku mai)	H		H	H	H	C	
Spermolepis hawaiiensis (NCN)	C	C	C	C	C	C	
Tetramolopium arenarium (NCN)					H	C	
Vigna o-wahuensis (NCN)		H	C	C	C	C	Ni (H), Ka (C)
Zanthoxylum dipetalum var. *tomentosum* (ae)						C	
Zanthoxylum hawaiiense (ae)	C		C	H	C	C	

KEY

C (Current): population last observed within the past 30 years
H (Historical): population not seen for more than 30 years
R (Reported): reported from undocumented observations
NCN: No Common Name
* taxon only known in cultivation